COVID-19 as an occupational illness.

Hazards Campaign - Webinar

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Statement of current interests

- Deputy Chair: Occupational Medicine Committee,
  British Medical Association (BMA)

- Member: Industrial Injuries Advisory Council (IIAC)

- Membre: Conseil scientifique, Réseau national de vigilance et de prévention des pathologies professionnelles (RNV3P), Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail (ANSES)

Structure of presentation

- Introduction:
  - “Covid-19 as an occupational illness” for the purposes of:
- Industrial Injuries Disablement Benefit (role of IIAC)
  - Data from the Office for National Statistics
- Reporting of Injuries, Diseases & Dangerous Occurrences Regulations (RIDDOR)
  - Comments / critique of HSE guidance & data
- Coronial System
- Conclusion & Discussion

Introduction

- Defining cases of covid-19 as of occupational origin is important for:
  - Observational epidemiology: time trends, comparisons of burdens and risks, study of interventions (aiding prevention)
  - Workplace investigation e.g. clusters (learning lessons for prevention)
  - Individuals e.g. for compensation

  BUT difficulties exist:

  - High & variable incidence in the community
  - Diagnosis usually easy – but not always (e.g. limited time window for RT-PCR tests, antibody tests unreliable: low sensitivity)
  - Sometimes backward tracing and genomic analysis can help
  - Determining exposure and threshold for causation are difficult

Prescription for Industrial Injuries Disablement Benefit (IIDB)

- Industrial Injuries Advisory Council (IIAC) produces:
  - Information notes (reports of reviews if insufficient evidence for a position paper)
  - Position papers (reports of reviews that do not result in a recommendation for a legislative change)
  - Command papers (reports resulting in recommendations for changes to legislation)
- Secretary of State (Work & Pensions) considers IIAC recommendation
- SoS decides on whether to change legislation by Statutory Instrument (SI) so as to give entitlement to IIDB

To recommend a disease & occupational exposure or circumstance for prescription (hence compensation)

IIAC would have to have:

- an evidence-based definition of the disease or condition
- evidence that there is a recognised risk to workers from the occupational exposure or circumstance
- estimation of the magnitude of the risk relating to the occupation (such that link between disease & occupation can be established or reasonably presumed in individual cases:- ~ *there is a doubling of risk*)
- an assessment of the exposures necessary for the development and severity of the disease

Examples of diseases covered by Industrial Injuries Disablement Benefit

Disease Number 14.2	Name of disease - Conditions due to biological agents	Type of job – Any job involving:
B5	Tuberculosis. TB infection.	Contact with a source of tuberculous infection. e.g. doctors, nurses, ambulance crews, pathology technicians and social workers.
B8B	Infection by hepatitis B or C virus	Contact with: (a) human blood or human blood products; or (b) any other source of hepatitis B or C virus

The above may need supplementary guidance such as on diagnosis, and assessment of severity / disability

e.g. in the case of covid such guidance might be needed for “post-acute covid-19” or “long covid” illnesses …

Office for National Statistics '2nd Bulletin'

- Some key findings are summarised based on medical certificates of cause of death involving covid and registered between 9 March and 25 May 2020:
- Occupations highlighted in red:
  - with a rate at least twice as high as for 'all' the 20-64y population
  - statistically significant difference from the 'all' population
  - presented only for occupations with at least 20 deaths
- Data abstracted from ONS Tables 1, 6a, 6b follow…

https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/coronaviruscovid19relateddeathsbyoccupationenglandandwales/deathsregisteredbetween9marchand25may2020

Males – individual occupations (SOC 4 digit level)

Age standardised death rates involving Covid

Individual occupation description	Deaths	Rate	Low.CI	Up. CI
Security guards & related occupations	104	74	59.6	88.4
Care workers & home carers	70	71.1	55	90.4
Taxi & cab drivers & chauffeurs	134	65.3	54.1	76.5
Food, drink & tobacco process operat.	32	64.3	43.7	91.1
Nursing auxiliaries and assistants	30	58.9	39.5	84.4
Chefs	49	56.8	40.1	77.4
Nurses	31	50.4	33.6	72.4
Vehicle techs, mechanics & electricians	36	44.3	30.7	61.7
Bus and coach drivers	53	44.2	32.6	58.4
Elementary construction occupations	36	42.1	29.4	58.2
Cleaners and domestics	34	38.3	26.3	53.7
'ALL' males, 20-64yrs inv. Covid-19	**3122**	**19.1**	**18.4**	**19.8**

Females – individual occupations (SOC 4 digit level)

Age standardised death rates involving Covid

Individual occupation description	Deaths	Rate	Low.CI	Up. CI
Care workers & home carers	134	25.9	21.5	30.4
National govt. admin.occupations	22	23.4	14.5	35.6
COMPARATORS:				
'ALL' females 20-64y inv. Covid-19	**1639**	**9.7**	**9.3**	**10.2**
Others (don't reach >2x)				
Sales & retail assistants	64	15.7	12.1	20.1
Nurses	70	15.3	11.7	19.6
Nursing auxiliaries & assistants	31	14.5	9.8	20.7

RIDDOR

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (2013)

- **RIDDOR reporting of COVID-19**
  https://www.hse.gov.uk/coronavirus/riddor/index.htm
- **Further guidance on RIDDOR reporting of COVID-19**

https://www.hse.gov.uk/coronavirus/riddor/riddor-reporting-further-guidance.htm

- Employer is obliged to report to HSE (sometimes to Local Authority) but subject to complicated guidance …
- "HSE accepts that these are not easy criteria to apply in the unusual circumstances presented by the coronavirus (COVID-19) outbreak."

- Usually for disease (or death) would need diagnosis in writing from doctor (though test result acceptable)

RIDDOR: “Reasonable evidence of occupational exposure”

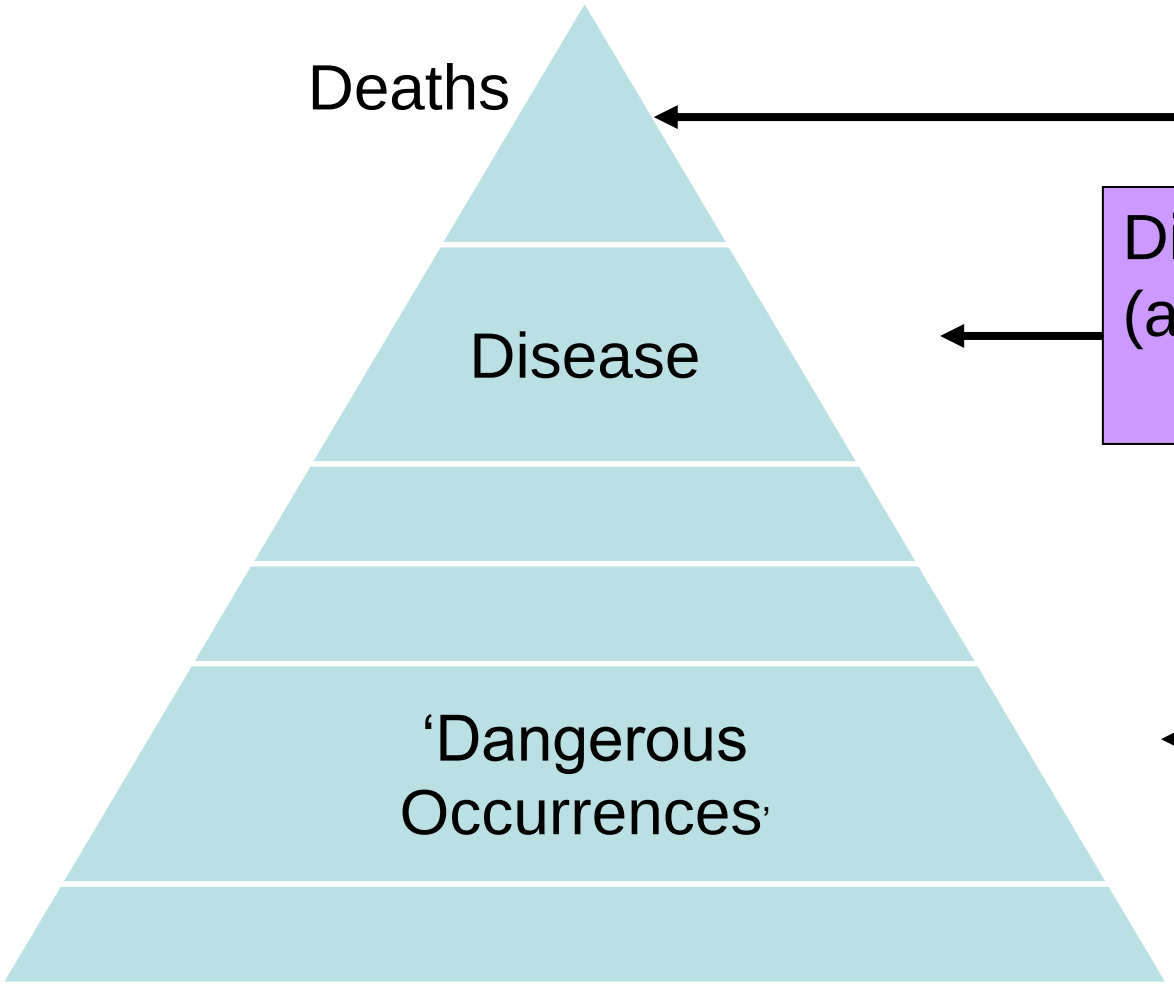
Factors to take into account ... could include ... whether or not ….. (*partial list – see links for full guidance*):

- the nature of the person’s work activities ...increased the risk of them becoming exposed ...
- there was any specific, identifiable incident that led to an increased risk of exposure...
- contact with a known coronavirus hazard without effective control measures, as set out in the relevant PHE guidance ..e.g. PPE

“ cases where a registered medical practitioner has highlighted the significance of work-related factors when communicating a diagnosis of COVID-19 - these cases would also be reportable.”

Reporting of Injuries, Diseases & Dangerous Occurrences Regs

Reported in GB to HSE (or LAs) from 10 April – 19 September 2020



Deaths: 152

Disease (alive): 9634

‘D.O.’*: ~200 *(241)*

*HSE evidence to select committee on 12.05.2020 *(& update to 6 days later)*

Reporting of Injuries, Diseases & Dangerous Occurrences Regs

Reported in GB to HSE (or LAs) from 10 April – 19 September 2020

- *Selected* Standard Occupational Classification [SOC] codes only

[SOC]	Total:	9786	(incl. 152 deaths)
[86]	Human health activities:	3978	(67)
[87]	Residential care activities:	3279	(49)
[55]	Accomodation	516	(5)
[96]	Other personal service activities	1113	(16)
[84]	Public admin. & defence	101	(3)
[85]	Education	78	(1)
[47]	Retail trade except motor vehicles	34	-
[10]	Manufacture of food products	100	(1)
[53]	Motor vehicle operators (drivers..)	-	-

NB: HSE acknowledges widespread under-reporting & misclassification

RIDDOR (covid-19) analyses and comments

Agius RM, Robertson JFR, Kendrick D, Sewell HF, Stewart M, McKee M. (2020) Covid-19 in the workplace. British Medical Journal 2020;370:m3577

https://doi.org/10.1136/bmj.m3577

Agius RM. (2020) Covid-19: statutory means of scrutinizing workers' deaths and disease. Occupational Medicine 2020

https://doi.org/10.1093/occmed/kqaa165

Agius R. (2020) Disease and death from work: RIDDOR and covid-19. Occupational Medicine. 2020.

https://doi.org/10.1093/occmed/kqaa155

thebmj

EDITORIAL

Covid-19 in the workplace

Reporting guidance should reflect risks to a wide range of workers

Faced with a novel lethal virus, employers have struggled to implement their legal duty to protect staff from harm in the workplace. There is no international case definition for attributing an occupational origin to covid-19 cases, and the World Health Organization has so far prepared a surveillance protocol only for healthcare workers.[1]

Employers are accountable, in the UK, to the Health and Safety Executive (HSE) and must notify it when there is "reasonable evidence" of a worker contracting covid-19 through occupational exposure.[2 3] In general, HSE expects to be notified if it is "more likely than not that the person's work was the source of exposure—as opposed to general societal exposure." However, HSE also states that work with the general public—as opposed to work with people known to be infected—is not usually sufficient to trigger reporting.[2]

HSE published a technical summary of the 8666 notifications of covid-19 in workers in England, Scotland, and Wales, including 125 deaths, from 10 April to 8 August.[4] The weekly number of notifications peaked at 1183 (including 23 deaths) in the week ending 2 May 2020, two weeks later than the peak of deaths among the general population.[5]

At least 3354 (39%) of the notified covid-19 cases were in people working in residential care and other social work, including 52 (42%) deaths. A further 3382 cases (39%) were among healthcare workers, including 50 (40%) deaths. As HSE acknowledges, these figures misjudge the true scale of the problem because of widespread under-reporting by employers. Misclassification further limits the comparison between sectors.[4]

ERICA DEZONNE/EMPICS/PA

The thousands of cases of covid-19 contracted at work warrant an urgent rapid review

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High risk

The statistical bulletins from the Office for National Statistics (ONS)[6] have shown that age standardised mortality rates for male security guards and related occupations were nearly four times higher than those for all men of working age, while for taxi, cab, bus, and coach drivers the age standardised mortalities were well over double. Although ONS analyses exclude many deaths subject to coroners' inquests and do not yet take into account comorbidity, socioeconomic characteristics, or other factors such as ethnicity, they provide some comparative evidence on covid-19 deaths potentially associated with work. They are consistent with the conclusion that jobs with frequent and close public exposure (besides health and social care) carry a higher risk of covid-19.[7 8] Such jobs should fall within the scope of future HSE reporting guidance and thus be subject to investigation.

Currently, HSE also intimates that if Public Health England (PHE) guidance on "effective control measures" [9] has been followed at work, cases of covid-19 among employees do not always need to be reported to HSE. Some have argued[3-11] that PHE's guidance does not offer adequate protection as it is consistent with the view that aerosol transmission is unlikely.[12] However, emerging evidence suggests the need to take precautions against aerosol transmission.[13 14]

HSE should now encourage notification of covid-19 in health and social care workers who became infected despite having followed PHE's guidance. Investigation of these cases would enable lessons to be learnt, such as whether the more precautionary European guidance on respiratory protective equipment should be used (wearing respirators rather than surgical masks) while managing people with suspected covid-19.[15]

As detailed in the HSE guidance,[2] doctors have an important role in notifying employers in writing (ordinarily with the patient's consent) of a diagnosis of covid-19. These reports should highlight the contribution of work related factors —for example, insufficient control measures. Moreover, some general practitioners who are employers have a legal duty as "responsible persons" to report to HSE, covid-19 attributed to occupational exposure in their employees.[2 16]

HSE should change its reporting guidance to reflect the risks in occupational sectors outside health and social care, and to consider whether current protective equipment and other control measures are adequate. The thousands of cases of covid-19 contracted at work warrant an urgent rapid review[18 19] of the national pandemic policy, followed by a full and wide ranging public inquiry.[3 20]

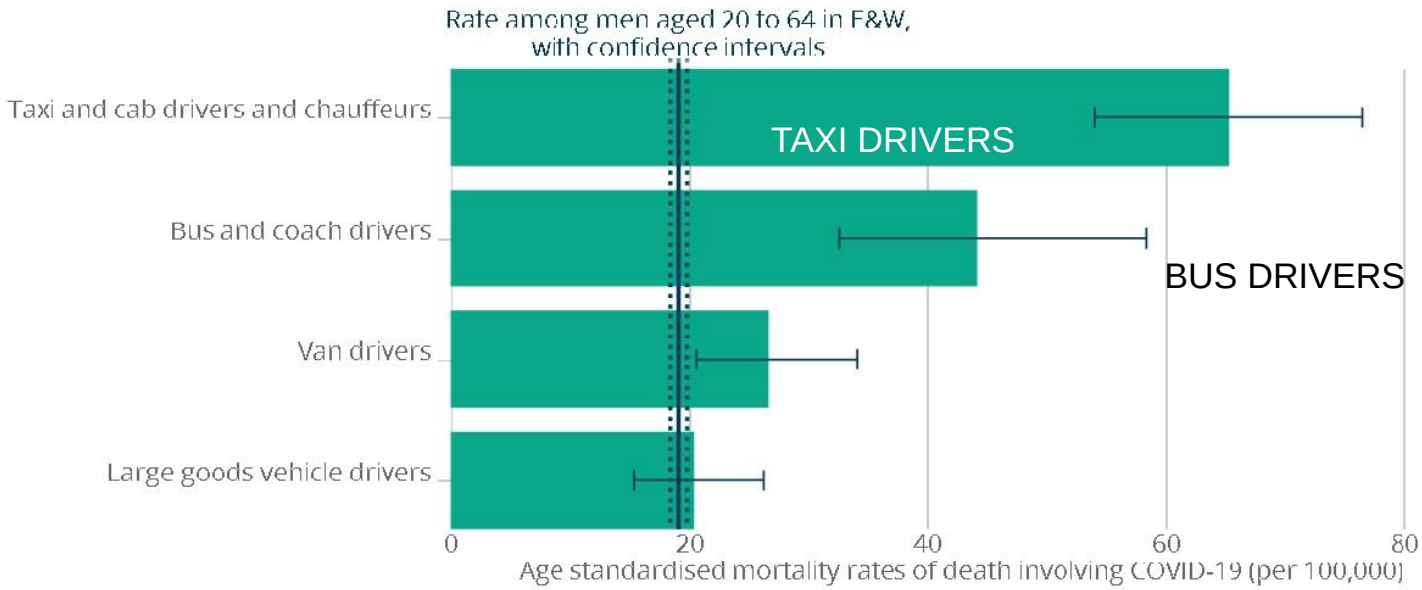
Cite this as: *BMJ* 2020;370:m3577
Find the full version with references at http://dx.doi.org/10.1136/bmj.m3577

“Reasonable evidence of occupational exposure” – comment example 1

Additionally, for an occupational exposure to be judged as the **likely** cause of the disease, **it should be more likely than not that the person’s work was the source of exposure** to coronavirus as opposed to general societal exposure. ...

Work with the general public, as opposed to work with persons known to be infected, **is not considered sufficient evidence** to indicate that a COVID-19 diagnosis is likely to be attributable to occupational exposure. **Such cases do not require a report.**

"do not need to conduct extensive enquiries in seeking to determine whether .. infection is work-related..judgement should be made on the basis of the information available"



Covid-19 RIDDOR guidance - comment example 2

- There must be **reasonable evidence** linking the nature of the person's work with an increased risk of becoming exposed to coronavirus.

Factors to take into account when making this decision could include:

- ....
- ....
- whether or not the person's work directly brought them into contact with a known coronavirus hazard without effective ***control measures, as set out in the relevant PHE guidance, in place such as personal protective equipment (PPE).***

Contrasting Personal Protection (PPE) guidance/standards

- UK bodies (PHE, NHS, HSE): FFP for selected so-called Aerosol Generating Procedures (AGPs) e.g. ventilation, endoscopy, dental drilling. However for most direct care within 2 metres of a suspected or confirmed case the default is a *Fluid resistant surgical face mask (FRSM Type IIR)*

- The European Centre for Disease Protection & Control (ECDC) suggests a *filtering face-piece respirator (FFP2 / FFP3)* when assessing a suspected case or managing a confirmed case of covid-19

https://www.ecdc.europa.eu/sites/default/files/documents/COVID-19-guidance-wearing-and-removing-personal-protective-equipment-healthcare-settings-updated.pdf

Investigation by HSE

- According to HSE criteria all RIDDOR reports of disease caused by biological agents warrant investigation
- But on average HSE conducted 100 such investigations every year
- So far about 10,000 RIDDOR reports for covid-19 received by HSE

100 X as many covid-19 reports as of all other biological agents in 1 year

- Investigations not conducted in public nor usually published in full
- HSE already signed up to PHE/DHSC & NHS guidance

Coroner (E&W) notification of deaths

- Why important?
  - Legal obligation for the attending doctor to notify HM coroner if "suspects that death due to disease attributable to employment"
  - Low threshold: 'only grounds for surmise' (notif. >RIDDOR)
  - Any employment e.g. public transport included (notif. >RIDDOR)

- Why relevant?
  - As above – theoretically more deaths notifiable than RIDDOR
  - But inadequate information from NHS/PHE/HSE about this
  - Coroner's inquest is more transparent & independent
  - Important for 'Health at Work' to secure best scrutiny and lessons learnt for future action / prevention

The coronial process (England & Wales)

- Coroner may decide to hold an inquest (*in 2019 only 14% of notified deaths had an inquest*)

  - asks for reports

  - summons witnesses to give evidence

  - > verdict, & issues a registrable ‘death certificate’

- Then coroner may issue a Report to Prevent Future Deaths (PFD) but in 2019 only 20% of inquests i.e. *~3% of notifications led to PFD*

  - e.g. to HSE, NHS (Trust or nationally), Secretary of State

  - obliged to reply in 56 days

- Chief Coroner may highlight ‘area of concern’

- But on average every year from 2016-9 inclusive for **all** E&W:

  - 8 PFD reports in total for Health/Safety/Accidents, of which:

  - 1 on ‘industrial disease’

  - 1 on PPE (none on Respiratory Protective Equipment)

Conclusion & Discussion

- A definition of ‘occupational covid’ / covid caused by work is not necessarily easy for observational epidemiology or legal purposes
- More work needs to be done before Secretary of State can decide comprehensively re prescription & hence compensation:

Some circumstances (of disease/ severity & of exposure) are much easier to define than others

Solution might be complex (including possible provision for delayed application)

- Important weaknesses & serious bias in statutory reporting (to HSE & Local Authorities under RIDDOR)

Investigations by HSE not necessarily all transparent

- Coronial inquests possible but limited in number and by experience of coroners – though exceptional outcomes possible

We need a Public Inquiry!

Thank you for listening

Questions, comments & discussion are welcome.

(C) Raymond Agius

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